

SECTION 11

SECTION 11 MITIGATION/ SECTION 61 FINDINGS AND COMMITMENTS

11.1 NPC Environmental Effects and Mitigation Measures

The mitigation measures proposed and summarized below address expected/potential impacts of QRCC. The mitigation has been developed during the MEPA process: an ENF, DEIR, FEIR, two (2) NPC's and an SFEIR. Additionally, the QRCC has developed mitigation in response to the Town of Acton Special Permits (2) and ACC NOI's (2). All comments received during the public review of QRCC from state and local agencies, as well as the public have been reviewed and incorporated in the following mitigation measures.

11.1.1 Traffic Impacts

As detailed in the NPC, Section 3, Traffic Impacts, the Proponent has formally reviewed the impacts of additional traffic due to TRQR with the Town of Acton Planning Board Special Permit Process. The Proponent has also met informally with Mass Highway. Following these review and consultations, the Proponent proposes the addition of a formal left turn lane on the Skyline Drive approach to Great Road that can accommodate approximately four vehicles. This will require widening Skyline Drive as it approaches Great Road.

Additionally, construction of sidewalks on the residential streets of TRQR and on Skyline Drive to Great Road will be built.

11.1.2 Wetlands

A limited area of BVW will be altered near the proposed stream crossing associated with Quail Ridge Drive. The actual amount of wetland fill proposed in connection with the construction of the 174-unit TRQR is approximately 520 square feet. Approximately 2,950 square feet of wetland that was filled in connection with the previous construction of the 18-hole golf course, pursuant to the Order of Conditions issued and extended by the ACC, dated March 20, 2002, will be left in place. Therefore, the total wetland fill associated with the proposed stream crossing, including the previously permitted fill, is 3,470 square feet.

Work associated with the 18-hole golf course included unanticipated wetland filling and impacts associated with the construction of a temporary road that will now be removed. As part of the TRQR project, affected areas will be restored to BVW. The total proposed wetland replication area will be 14,224 square feet, resulting in a net increase of 6,200 square feet of BVW.

The proposed mitigation complies with the Massachusetts Wetlands Regulations (310 CMR 10.00) and related Performance Standards. In addition, the project as currently designed, complies with the more stringent standards of the Acton Wetland Bylaw and its associated regulations.

In accordance with 314 CMR 9.04 and 9.09 (in part) QRCC shall "under its unexpired Final Order of Conditions and followed by a Certificate of Compliance, and a recorded deed

restriction provide notice to subsequent purchasers the amount of fill for the single and complete project to less than 5,000 square feet cumulatively of bordering and/or isolated vegetated wetlands and land under water..."

11.1.3 Stormwater and Water Quality

The stormwater management system is designed to promote the collection of runoff and will attenuate site runoff up to and including the 100-year storm event. The stormwater management system for TRQC was also designed in accordance with *DEP's Stormwater Management Standards*. To comply with the standards, an integrated system of collection, detention/retention, and infiltration/recharge was designed to maintain developed peak runoff rates at or less than those experienced under existing watershed conditions. The integrated stormwater management system was also designed to collect and treat runoff generated by the proposed development with deep sump catch basins, *Stormceptor* treatment units, stormwater basins and swales, and the recharge of roof runoff. The implementation of a comprehensive approach to the treatment of runoff, in accordance with the *best management practices* of *DEP's Stormwater Management Standards*, the reduction of the golf course from 18-holes to 9-holes while maintaining current pesticide, and herbicide management practices, and the continued collection and treatment of runoff that flows overland contribute to the goal of ensuring that the water quality of stormwater discharges, and as a result that of receiving waters, is maintained and improved to the maximum extent possible.

11.1.4 Wastewater

The total estimated sewage design flow for TRQR is 57,835 gpd. The proposed wastewater disposal system capacity, therefore, has been designed conservatively to accommodate a project 60,079 gpd. The proposed Quail Ridge Wastewater Treatment Facility will be of the MBR type. A portion of the effluent will continue to be discharged to the existing Title V leaching field with a capacity of 10,000 gpd. Additional effluent will be disposed of via the proposed drip irrigation fields, with a design capacity of 50,079 gpd, located throughout the remaining 9-hole golf course.

11.1.5 Potable and Irrigation Water Supply

Potable water will be supplied by the AWD. A Water Impact Report was filed with the AWD in June of 2008. As described in an application to the AWD, water usage is estimated to be 57,835 gpd. Summer usage will increase to 96,629 due to lawn and plantings irrigation of the grounds at TRQR. This does not include irrigation of the remaining 9-hole golf course, which will continue to be supplied a by deep water well, and irrigation pond. The Condominium will adhere to any AWD summer water conservation measures including reducing and/or ceasing outside water irrigation at the TRQR. Water service will continue to be provided via a two-mile extension of the water main at the SCS on Skyline Drive.

Irrigation for the remaining 9-hole golf course will be provided by an existing deep water well and irrigation pond. Presently the maximum withdrawal allowed is 99,000 gpd. Reduction of the golf course by half will reduce the need for irrigation water on the site by an estimated 40% (39,500 gpd). However, all irrigation water withdrawals continue to be subject to the 2007 ACO restricting water withdrawals to 99,000 gpd and 3 million gpd per any three-month period. Additionally, strict DEP reporting guidelines remain in place, including stream flow analysis,

water levels from wetland piezometers, water quality testing and water level monitoring from test wells. Per the 2007 ACO, a WMA permit was submitted to DEP on August 9, 2007, Transmittal Number W149295. A response to DEP's Order to Complete (OTC) will be submitted in July, 2008.

11.1.6 Archeological Resources

Section 7 discusses the FEIR use of salvaged quarry stones from past quarry operations. Stones that were reused as tee markers and landscape features on the northern half of the golf course at the site of TRQR will be moved and re-used for trailheads, street signs and numbering, and landscape features.

11.1.7 Construction and Project Phasing

Incorporating BMP's in guidelines established by both the DEP and the EPA, an erosion and sediment control program will be instituted to minimize impacts during construction to wetland resource areas. The NPC construction will comply with the NPDES General Permit for Storm Water Discharges from Construction Activities. A SWPPP along with a Notice of Intent will be filed with the EPA and a permit obtained before any construction activities begin at the site. No protective measures will be removed until vegetative cover or other stabilization is full established. A maintenance and inspection program will be active during construction.

The Proponent will continue to avoid blasting wherever possible. Additionally, where blasting is necessary, advance notice will be made to the Town of Acton, Concord, and abutters. Perchlorate will not be used as a blasting agent at the site.

11.2 Section 61 Findings

According to the MEPA statute, MGL 30, Section 61, state agencies must "review, evaluate and determine the impact on the natural environment of all works, projects or activities...and use all practicable means and measures to minimize damage to the environment...Any determination made by an agency of the Commonwealth shall include a finding that all feasible measures have been taken to avoid or minimize said impact." Furthermore, MEPA requires that if the NPC involves the modification of a previous Section 61 Finding, the proponent must include a proposed modified Section 61 Finding in the NPC.

11.2.1 State Agency Actions necessary:

- Massachusetts Highway Department (MHD) Amended Access Permit
- DEP Groundwater Discharge Permit
- DEP Water Distribution System Modification Permit

Proposed Section 61 Findings – MassHighway

Project Name: Quail Ridge Country Club
Project Location: Acton
Project Proponent: Quail Ridge Country Club, LLC
EOEA Number: 12503
Reference: Highway Access Permit Modification

In accordance with the provisions of M.G.L., c. 30, Section 61 and 301 CMR 11.00, the Secretary of Environmental Affairs finds, in a Certificate dated August 29, 2008, that the Supplemental Final Environmental Impact Report complies with the MEPA statute and regulations.

Potential impacts and mitigation measures are found in Section 10 of the Notice of Project Change.

A Highway Access Permit Modification is required per the present description of the project. MassHighway must issue a Section 61 Finding.

Highway Access Permit Modification

The project will require a Highway Access Permit Modification from MassHighway. Through the MEPA review process, the following mitigation measures have been determined to be adequate to mitigate the projects potential impacts on the state highway system:

The addition of a formal left turn lane on the Skyline Drive approach to Great Road that can accommodate approximately four vehicles. This will require widening Skyline Drive as it approaches Great Road.

MassHighway, having reviewed the MEPA filings for the project, finds that pursuant to M.G.L. c. 30, Section 61, that with the implementation of the recommended mitigation measures, all practicable means and measures have been taken to avoid or minimize potential damage to the environment.

MassHighway

By

Date

Proposed Section 61 Findings – Mass DEP

Project Name: Quail Ridge Country Club
Project Location: Acton
Project Proponent: Quail Ridge Country Club, LLC
EOEA Number: 12503
Reference: Water Discharge Permit

In accordance with the provisions of M.G.L., c. 30, Section 61 and 301 CMR 11.00, the Secretary of Environmental Affairs finds, in a Certificate dated August 29, 2008, that the Notice of Project Change complies with the MEPA statute and regulations.

Potential impacts and mitigation measures are found in Section 11 of the SFEIR.

A Water Discharge Permit is required per the present description of the project. The Department of Environmental Protection must issue a Section 61 Finding.

Water Discharge Permit

The project will require a Water Discharge Permit issued by the Department of Environmental Protection. Through the MEPA review process, the following mitigation measures have been determined to be adequate to mitigate the projects potential impacts on the state highway system:

The installation of monitoring wells up gradient and down gradient of each drip irrigation field.

An information package explaining the proper disposal of unwanted or expired pharmaceuticals will be distributed with sign-off to buyers at the time of a condominium purchase.

The Department of Environmental Protection, having reviewed the MEPA filings for the project, finds that pursuant to M.G.L. c. 30, Section 61, that with the implementation of the recommended mitigation measures, all practicable means and measures have been taken to avoid or minimize potential damage to the environment.

Department of Environmental Protection

By

Date

Proposed Section 61 Findings – Mass DEP

Project Name: Quail Ridge Country Club
Project Location: Acton
Project Proponent: Quail Ridge Country Club, LLC
EOEA Number: 12503
Reference: Water Distribution System Modification

In accordance with the provisions of M.G.L., c. 30, Section 61 and 301 CMR 11.00, the Secretary of Environmental Affairs finds, in a Certificate dated August 29, 2008, that the Notice of Project Change complies with the MEPA statute and regulations.

Potential impacts and mitigation measures are found in Section 11 of the SFIER.

A Water Distribution System Modification is required per the present description of the project. The Department of Environmental Protection must issue a Section 61 Finding.

Water Supply Distribution System Modifications Approval

The municipal water supply system will be modified to increase the amount of potable water to the site. The AWD has adequate capacity to serve Quail Ridge potable water demand. No adverse environmental impacts are anticipated to result from this activity.

Based on its review of the MEPA documents and the Department's regulations, the Department finds that the terms and conditions to be incorporated into the approval required for this project will constitute all feasible measures to avoid damage to the environment and will minimize and mitigate such damage to the maximum extent practicable for those impacts subject to the Department's authority. Implementation of the mitigation measures will occur in accordance with the terms and conditions set forth in the permit.

The Department of Environmental Protection, having reviewed the MEPA filings for the project, finds that pursuant to M.G.L. c. 30, Section 61, that with the implementation of the recommended mitigation measures, all practicable means and measures have been taken to avoid or minimize potential damage to the environment.

Department of Environmental Protection

By

Date

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COMMONWEALTH OF MASSACHUSETTS
EXECUTIVE OFFICE OF ENERGY & ENVIRONMENTAL AFFAIRS
DEPARTMENT OF ENVIRONMENTAL PROTECTION
Central Regional Office, 627 Main Street, Worcester, MA 01608

DEVAL L. PATRICK
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LAURIE B. BROWN
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January 22, 2008

RECEIVED

JAN 23 2008

MEPA

Secretary Ian A. Bowles
Executive Office of Environmental Affairs
100 Cambridge Street, 9th Floor
Boston, MA 02114

Attention: MEPA Unit – William Gage

Re: Notice of Project Change (NPC)
Quail Ridge Country Club
Acton
EOEEA# 12503

Dear Secretary Bowles,

The Massachusetts Department of Environmental Protection (MassDEP) Central Regional Office (CERO) offers the following comments on the NPC submitted for the Quail Ridge Country Club in Acton. The Secretary's FEIR Certificate was issued on April 1, 2002 for an 18-hole golf course in Acton. The NPC was filed because the proponent now seeks to build The Residences at Quail Ridge – a senior Residence. The Residences at Quail Ridge will replace 9 of the 18 holes on the golf course. The project will consist of 170 units in a mix of single-family detached dwellings, town house style complexes, and garden style residences.

MassDEP has reviewed the NPC and offers the following comments:

Wastewater

The NPC states (page 39) that the project is expected to generate 30,540 gallons per day (gpd) of wastewater. A groundwater discharge permit was submitted, however, the application was for a flow of 60,000 gpd that included Phase I for 170 age restricted units and the golf course and Phase II with 412 bedrooms of a senior living facility (page 4 of GW application in Appendix F). Since MassDEP cannot issue the permit until the MEPA process is completed the NPC should include Phase II of this project so that both phases can be commented on together.

1.1

There were a few inconsistencies in this NPC:

- The NPC states that the flows for an assisted living facility are 75 gpd per bedroom that is incorrect; they are 150 gpd per unit. The estimated flows must be increased for Phase II in the groundwater permit. (1.2)
- The number of proposed units is different throughout the report. The NPC application and Groundwater application call for 170 age-restricted units in Phase I. In appendix H, the construction sequence plan describes 174 units. The traffic study uses 175 units. The exact number of units to be built must be clarified. (1.3)

Wetlands

After review of the NPC, the Wetlands Program has the following comments:

- The proponent will be required to submit a minimum of a simplified wildlife habitat evaluation form in accordance with the procedures in the Massachusetts Wildlife Habitat Protection Guidance for Inland Wetlands dated March 2006. (1.4)
- Proponent will be required to submit a 401 Water Quality Certification (WQC) Application to MassDEP or file a deed restriction in accordance with 314 CMR 9.00. (1.5)
- MassDEP recommends that the proponent propose Riverfront Area plantings or enhancements given the new work proposed in the Notice of Intent and NPC as mitigation for work in Riverfront Area. (1.6)

Water Supply

The Water Management Act permit application before the Department is a request to withdraw 26 million gallons per year (MGY) for use in irrigating an 18-hole golf course. The NPC includes the revised development plan to include 170 age restricted residential housing units and a 9-hole golf course. The proponent estimates the 9-hole golf course will require approximately 40% of the water needs for the 18-hole golf course. In addition to golf course irrigation, water may be used for ornamental plants and pool filling.

At this time the Department is waiting for a response to an Order To Complete (OTC) from the Quail Ridge Country Club proponents. After review of the responses to our OTC, a decision will be made on the WMA permit application. It is anticipated that that the WMA permit will be issued for the 18-hole golf course until the golf course is reduced to 9 holes. If the 9-hole golf course is in operation at the next 5-year review of the permit, at a minimum, the withdrawal volume will be reduced to reflect the reduced demand. (1.7)

A revised Section 61 Finding should include additional stormwater and water mitigation measures. Additionally, the proponent should provide an electronic version of the revised Section 61 Findings to MassDEP. (1.8)

The MassDEP CERO appreciates the opportunity to comment on the proposed project. If you have any questions regarding these comments, please do not hesitate to contact Stella Tamul, MEPA Coordinator, at (508) 767-2763.

Sincerely,

A handwritten signature in cursive script that reads "Paul Anderson".

Paul Anderson
Deputy Regional Director
Bureau of Resource Protection

Cc: Commissioner's Office, MassDEP
Martin Suuberg, Regional Director, CERO

ACES Acton Citizens for Environmental Safety

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Secretary Ian A. Bowles
EOEEA
100 Cambridge Street, Suite 900
Boston, MA 02114

Re: Quail Ridge Country Club
Notice of Project Change, EOEA #12503

RECEIVED

January 25, 2008

JAN 28 2008

MEPA

Dear Secretary Bowles,

Acton Citizens for Environmental Safety, (ACES), is a nonprofit citizens group formed in the early 1980s to promote the protection of public health and safety and to foster environmental quality and the wise use of natural resources. Given the proximity of the proposed project to the Acton Water District public wells--Conant I and Conant II, as well as several private wells and a Town of Concord Public Water supply, ACES has reviewed the above referenced document, and has the following comments:

Wastewater System - Drip Irrigation as Leaching Field. ACES has concerns about the viability of a drip irrigation system as a reliable means of waste water disposal for such large quantities of wastewater, especially given our climate. In its original Integrated Pest Management Plan, Quail Ridge indicated that it was using several cultivars of creeping bentgrass. Creeping bentgrass has relatively shallow roots - about 5 inches deep. (Other typical turf grasses may have similarly shallow roots.) Given that 5 inches is not below the frost line, how can drip irrigation lines that will benefit the turf be used in the winter? Conversely, how can drip irrigation lines that are below the frostline benefit the bentgrass? No details are provided on the role of the "reserve fields" shown on the figure in Appendix G. Are these areas simply designated for later contingency purposes, or will they be developed before building occupancy, as conventional leaching fields, (for current winter and/or backup use)? In the NPC document, most of the design flow for the site, (up to 50,000 gallons per day), is slated for the drip irrigation method of disposal; alternative methods should be included (2.1)

Wastewater System - Medications. As people age, they tend to require more prescription medications, and to take more nonprescription analgesics. Metabolites of these drugs, as well as surplus prescription drugs that may be flushed as a means of disposal, are an environmental and human health concern. Given the proximity of the proposed "over-55" development to both public and private water supplies, please consider requiring action, such (2.2)

as resident education, to ensure reduction/prevention of groundwater contamination with drugs.

Blasting. "Perchlorate will not be used as a blasting agent at the site." Given that there are private drinking water wells near the project site, the blaster should be required to pay for before-and-after testing of these wells, and should be required to pay for appropriate treatment in the case that any wells become contaminated. Given the scope of the project, the cost of testing and treatment would be negligible. Some blasting agents that contain perchlorate do not have the perchlorate reflected on their Material Safety Data Sheets. (2.3)

Pesticides and Herbicides. The proposed housing is in close proximity to a 9-hole golf course. Pesticide and herbicide use on the golf course should be executed in such a way as to minimize impact on the residential section of the project. More globally, the area is between two public water supplies and close to some private potable drinking water wells, and care should be taken that golf course maintenance practices do not adversely impact these public and private water supplies. (2.4)

Thank you for the opportunity to provide these ACES comments on the Notice of Project Change for the Quail Ridge Country Club in Acton, (EOEA #12503).

Sincerely,



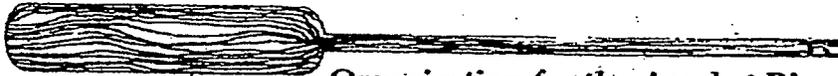
Mary Michelman
ACES President
6 Magnolia Drive
Acton, MA 01720
msmichelman@comcast.net
978-263-7370

electronic cc: William Gage, MEPA Analyst

COMMENT LETTER #3

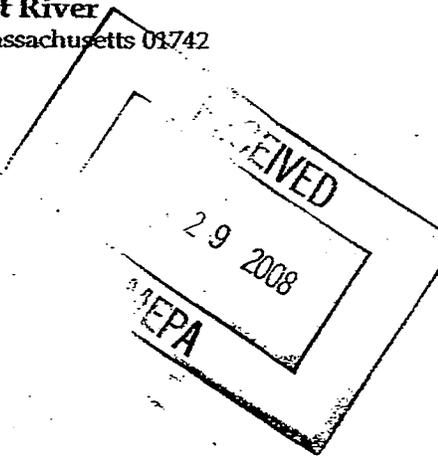
B6

OAR



Organization for the Assabet River
9 Damonmill Square, Suite 1E, Concord, Massachusetts 03742

January 29, 2008



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Ian Bowles, Secretary
Executive Office of Energy and Environmental Affairs
100 Cambridge St., Suite 900
Boston MA 02114

Fax: 617-626-1181

Attn. William Gage, MEPA Office

**Subject: OAR Comments on the Notice of Project Change
EOEEA #12503; Quail Ridge Country Club**

Dear Secretary Bowles,

Thank you for the opportunity to review and comment on Quail Ridge Country Club's Notice of Project Change (NPC). The proponent intends to build a 174-unit residential development to replace half of the 18-hole golf course proposed in the FEIR. The project is located in the Nashoba Brook basin in the Assabet River watershed.

Nashoba Brook basin is classified as hydrologically stressed in the Massachusetts Water Resources Commission report titled *Stressed Basins in Massachusetts* (2001). Nagog Brook, which traverses the golf course, is a tributary to Nashoba Brook. Wells BE-7 and BE-5 are both within 1,000 feet of Nagog Brook. Nagog Brook is considered by the Massachusetts Division of Fisheries and Wildlife to be a cold water fishery resource. Nashoba Brook is stocked with trout and is a valuable recreational fishery. Fishery habitat is dependent on maintaining base flow throughout the year. OAR is particularly concerned with proposals which may diminish the summer and fall base flow of Nagog Brook through groundwater withdrawals or increases in impervious area.

Unfortunately, the NPC does not contain adequate information to assess the environmental impact of the proposed changes. It does not state how much water the applicant proposes to withdraw for irrigation, which wells will be used, or the impact of such withdrawals. In addition, in 2007 the proponent submitted an application under the Water Management Act for withdrawals for irrigation of an 18-hole golf course. The application also provided inadequate information. DEP determined that it failed to meet minimum requirements and issued an Order to Complete to Quail Ridge. The proponent needs to explain the connection between these two very different requests.

Thank you for considering our comments. Please call me or Alison Field-Juma, OAR's Policy Director, if you have any questions concerning this letter.

Sincerely,

Susan F. Beede
Acting Executive Director

Cc: Acton Board of Health
Acton Water District

(978) 369-3956

fax: (978) 318-0094

oar@assabriver.org

www.assabriver.org

3.
3

COMMENT LETTER #4

BG

January 28, 2008

Secretary Ian A. Bowles
EOEA
100 Cambridge Street
Boston, MA 02114

RECEIVED

JAN 29 2008

MEPA

Re: Quail Ridge Country Club,
Notice of Project Change, EOEA #12503

Dear Secretary Bowles,

I am writing to express my concern about the Quail Ridge Country Club in Acton, specifically, the wastewater system and pesticide use.

Drip irrigation using treated wastewater is a reliable source of irrigation water; however, drip irrigation is not a reliable means of disposal for treated effluent. The reliability of a drip irrigation system as a means of waste water disposal for up to 50,000 gallons per day, especially given our climate, is questionable. Quail Ridge indicated that it was using several cultivars of creeping bentgrass, which has relatively shallow roots, not below the frost line. Drip irrigation lines that will benefit the turf cannot be used in the winter.

A.1

The proposed project creates housing for over-55 individuals in close proximity to a golf course, where pesticide and herbicide use are abundant. This area is also between two public water supplies and close to some private drinking water wells, potentially threatening these water supplies.

A.2

Sincerely,

Debra Andell
8 Mohawk Drive
Acton, MA 01725

*copy to
D.E.P.
a photo
w/ 4 king
beds
a set
beer*

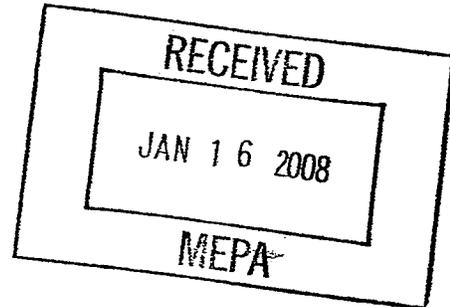
COMMENT LETTER # 5

BG

Carol Holley
39 Pope Road
Acton, MA 01720

January 14, 2008

Secretary Ian A. Bowles
Executive Office of Energy
And Environmental Affairs
100 Cambridge Street
Boston, MA 02114



Re: Quail Ridge Country Club
Notice of Project Change
EOEA #12503

Dear Secretary Bowles,

I am writing to comment on the above referenced Notice of Project Change. While I have many specific responses to specific sections of the NPC document noted in the attached Section-by-Section Comments, my overarching concerns are noted below:

1. Documents such as these should be provided to commenters in electronic format (preferably .pdf files), with only figures larger than 8.5x11 inches provided in paper copy. This practice would reduce paper use, reduce production time, and reduce energy consumption related to document production.
2. Within the context of the document, it is very difficult to determine exactly what is intended – including what is to be built, and who will be making use of it.
3. Data changes from one section of the document to another, particularly the number of housing units proposed.
4. Data collection activities are referenced, particularly with traffic counts, but the resulting data are not provided.

I urge you to require corrections to this document, and I respectfully request that you require the proponents to answer the concerns raised in the attached comments.

Thank you for the opportunity to comment on this project, as it will have significant impact on many aspects of quality of life and the environment in Acton.

Sincerely,

Carol Holley

Encl.

Section-by-Section Comments

Section 1 – Notice of Project Change Form

Acres of land altered – if subsurface drip irrigation is introduced into the 9-hole golf course, does this alter the land on that section of the project? What constitutes an “alteration”?

5.1

Number of housing units – see later comments; this number is sometimes 170, sometimes 175, and also 174 in various sections and appendices of the document

5.2

Attachment 5 – List of all agencies and persons – “11 Concerned Citizens” does not exist. Carol Holley was one of eleven INDIVIDUALS who signed a single comment letter. In the fax cover sheet accompanying this letter, the individual commenter status of each commenter was noted.

Section 2 – Project Overview

2.3. The number of residential units proposed in this section is 170. This section appears to state that the Common Area, including the Golf Course Facility, is for the benefit of the Condominium. Is the GCF for the benefit of the condominium only? Will the 7,500 sq. ft. restaurant be for the condominium only? Traffic projections will change radically if they are not. Acton’ Zoning Bylaw section 9B 4.6 states: “Support services to meet SENIORS’ needs, such as ...recreation and leisure facilities....” And 9B 4.7 states “Convenience services intended primarily for its residents, such as...Restaurants...provided not more than 10% of the AREA of the development is dedicated to such uses.” Therefore, according to the zoning bylaw, use of neither the restaurant nor the recreational facility are *required* to be limited to the owners of the condominium.

5.3

2.4.1 Notes the number of units again as 170.

Section 3 – Traffic Impacts

3.2 “The entire site will be pedestrian friendly” – however, there is no continuous pedestrian connectivity to nearby commercial areas of Acton, such as the Acton Woods shopping Plaza.

5.4

3.3 This section notes that there will be “approximately 175 units of age restricted housing” and the restaurant will have “35 to 50 seats”. The number of housing units and number of restaurant seats help determine traffic impacts. This is the first introduction of the number 175 for housing units. A 50-seat restaurant seems large for an establishment created “primarily” for the use of an under-200 unit development, in accordance with the current Acton Zoning Bylaw .

5.5

- 3.4 "The existing transportation conditions in the study area were assessed in February 2007 and again in October 2007." February Daily Traffic Volumes are given in Table 3-1. The October data is missing. October data should also be provided in this document if it indeed was assessed. (5.6)
- 3.5.1 Background Traffic Growth. "After adjusting the February traffic volumes for seasonal variation, the weekday daily traffic volume data showed a negative growth rate of 0.58 percent per year." What did the October traffic volumes show? If they were not analyzed, why not? (5.7)
- 3.5.2 Site Specific Development. This document only refers to Acton-based development. Upstream communities, particularly Littleton and Groton, should have been contacted to "determine if there were any development projects that might affect future traffic volumes in the study area." A large residential development is in process in Littleton ("The Farms"), between Skyline Drive and Littleton Center, that will impact traffic volume in this area, a substantial, regional-draw car dealership is under construction in the same area, and a shopping mall has recently been enlarges. It should also be noted that the Ellsworth Village development is not Senior Adult Housing-Detached, but consists of duplexes and triplexes. (5.8)
- 3.6 The number of units should be consistent throughout the document, as other assumptions are based on this number. The maximum proposed restaurant seating should be used as the more conservative number. (5.9)
- 3.6.1 The peak hour trip generation seems to assume that many residents of an over-55 development do not work regular hours – 56 vehicle trips during the weekday AM peak hour assumes that less than one-third of the units will have one resident (or two in one vehicle) that will commute to a place of employment during typical commute hours. Given the projected demographics, is this a reasonable assumption? (5.10)

This section refers to "club members already on site" which indicates non-resident users of a golf club; however, other sections of this documents state that the golf facility is "for the benefit of the condominium". To assume that a "quality restaurant" would follow the current "outside" use of the current country club has no basis in fact, as the country club has been publicized as a members and guests only operation, and has been significantly, if not fatally, undersubscribed. (5.11)

It is interesting to assume that the golf course's proposed reduction to 9 holes will reduce traffic. QRCC has not been able to fulfill its membership quota by a large margin, which is the publicized reason for the conversion to housing and a half- (5.12)

sized golf course. Given the apparently light current use of the site, as well as its largely seasonal nature, it may not be appropriate to posit this reduction in trip numbers.

Table 3-4. This shows the restaurant as creating 102 vehicle trips/weekday. The text indicates 674 vehicle trips/weekday (p. 18). That's a significant discrepancy, and it is questionable to assume that most restaurant patrons "would be club members already on site or residents of the new 175 units....", especially given that a club with off-site members is not an explicit part of this proposal. It is not noted if the vehicle trip figures for the restaurant are for a 35- or 50-seat establishment. Restaurants are high-overhead operations, with expenditures for staffing (no trip counts for staff are noted) as well as rent, furnishings and tableware, equipment, perishable goods, and regular garbage removal.

5.13

"By factoring service-cycle time with the total number of available seats, one can calculate a restaurant's maximum occupancy for any given day or day part"¹ If this is to be a "quality" restaurant and one assumes an hour for lunch and one and a half hours for dinner, there could be two seatings at each cycle, for a potential of up to 200 customers/day. Further, it is probable that a restaurant of this size could not be "primarily for its residents", and therefore in violation of Acton's current Zoning Bylaw.

5.14

3.7.2 Intersection Operating Conditions. This development will also adversely impact LOS at the downstream intersections of Great Road with Brook Street, Strawberry Hill Road, Esterbrook Road, Concord Road and Pope Road, Wetherbee Street and Keefe Road in Acton, and Commerford Road in Concord.

5.15

3.9 EIR Mitigation. While the geometry has been improved, sight line issues due to elevation changes and curvature of Great Road remain. Further, the additional lanes added to Great Road frequently generate more confusion than efficiency in traffic flow, based on personal experience and the anecdotes of acquaintances.

5.16

3.10 Conclusion NPC Mitigation. Again, the figure of 175 units is given, rather than the 170 units noted in the form in Section 1.

5.17

¹Muller, Christopher C. "A simple measure of restaurant efficiency".
Cornell Hotel & Restaurant Administration Quarterly, Tuesday, June 1 1999.
<http://www.allbusiness.com/accommodation-food-services/288273-1.html> accessed 1/6/08.

Section 4 – Wetlands, Drainage and Water Quality

4.3.2 “The height of the box selected was 10’ to allow for a 4’ embedment into the existing ground.” How does this relate to potential maximum groundwater elevations?

5.18

4.3.5 “If after one growing season, wetland vegetation has not become established...” Who is to monitor the success of the wetland replication?

5.19

4.4 Wetland Summary. While this paragraph is encouraging, there are questions regarding pesticides and herbicides from the golf course that could become airborne or seep into groundwater and adversely impact natural areas.

5.20

4.5.1 Stormwater analysis. “The Natural Resources Conservation Service (NRCS) soil survey report for Middlesex County...” This report was published before construction of the golf course. The golf course construction significantly altered the topography and soil composition of the site. Is this characterization still valid? Are more recent characterizations available?

5.21

4.5.2 It seems to be presumed that the clay liner of the retention pond, which has been noted to have failed in the past, will not fail in a 100-year storm event. What will keep it from doing so? It would be nice to see some Low Impact Development Integrated Management Practices (LID IMP’s) included in the plan. While the efficacy of IMP’s are limited in frozen conditions, they can be quite effective in other seasons and are currently being touted on the DEP website.

5.22

5.23

Standard #9 – will the O&M of the stormwater system be subject to any review by an outside party?

5.24

Section 5- Irrigation Water Supply

5.2 “Water quality monitoring results and water withdrawal records have not yet been submitted for review.”² How will submission of these records to environmental reviewing parties be handled in the future in order to ensure they occur?

5.25

Section 6 – Potable Water and Wastewater Disposal

6.3 The figure of 170 units is used in this section; the water use would increase if 175 units are constructed.

5.26

² Letter to Roland Bartl, Acton Town Planner, from Michael J. Toohill, Project Manager and Senior Environmental Scientist, ENSR International, Re: IPM/TM Environmental Review of Quail Ridge Country Club, Acton Massachusetts, Fall 2005 Review, dated January 4, 2006

- 6.4 The number of bedrooms per unit or total number of bedrooms in the development, critical to Title V calculations, would have been appropriate to introduce in this section. (5.27)

Table 6.1 The 50-seat figure is appropriately used here. Again, the number of residential units has dropped from 175 to 170, and the number of bedrooms/unit is not noted. (5.28)

- 6.5.1 Wastewater System. As people age, they tend to require more prescription medications, which are not typically broken down in sewage treatment facilities. Metabolites of prescription drugs, as well as surplus prescription drugs that may be flushed as a means of disposal, are an environmental and human health concern. Is there a way, such as resident education, to mitigate groundwater contamination with prescription (or non-prescription drugs, as acetaminophen is also persistent³) drugs? (5.29)

- 6.5.2 Drip irrigation using treated wastewater is a reliable source of irrigation water; however, drip irrigation is not a reliable means of disposal for treated effluent. In a recent study of creeping bentgrass⁴, the "majority of roots were found in the upper 10 cm of soil."⁵ This depth is not below the frost line; how will lines be kept from freezing? Further, another article indicated that "waterlogged soil coupled with high temperatures caused rapid and extensive root dieback and death."⁶ This information indicates that irrigation has limited capacity and reliability as a wastewater disposal method. How will the balance of 50,000 gallons/day of design flow be disposed of? (5.30)

- 8.3.2 Open Space. "A small parking area for visitors/hikers is planned just off the trail entrance." From this statement, can it be presumed that sections of the subject property will be open to the public. Will there be public access restrictions? Are these visitors included in projected traffic counts? (5.31)

³ Glassmeyer, Susan T. et al. "Identifying Chemical Compounds from Wastewater Discharges" (undated) www.cwea.org/conferences/2007/Chemicals/Identifying_Chemical_Compounds_from_Wastewater_Discharge.pdf accessed Jan. 8, 2008.

⁴ Cornish, Silva and Mungeam, Inc. "Turfgrass and Integrated Pest Management (IPM) Plan for Quail Ridge County Club, Acton, Massachusetts, February 11, 2002. Quail Ridge Country Club Final Environmental Impact Report, Appendix C, p. 23.

⁵ *Crop Science* 42:1241-1250 (2002), © 2002, Crop Science Society of America
"Mowing Effects on Root Production, Growth, and Mortality of Creeping Bentgrass" by Xiaozhong Liu and Bingru Huang, Dept. of Plant Science, Rutgers Univ., New Brunswick NJ.
<http://crop.scijournals.org/cgi/content/full/42/4/1241> accessed 1/5/08

⁶ Rimelspach, Joseph W. et al. "1995—A Challenging Year for Ohio Golf Courses." *Ornamental Plants: Annual Reports and Research Summaries, Special Circular 152-96.*
http://ohioline.osu.edu/sc152/sc152_8.html accessed 1/5/08

Section 9 – Construction and Project Phasing

9.3.4 Cut and Fill Calculations. Pavement. Total paved area. Does this calculation include the parking area for open space? Is additional parking area beyond what is currently in place for QRCC envisioned for patrons of the restaurant?

5.32

9.3.6 Earth Removal. "Perchlorate will not be used as a blasting agent at the site." Acton has had an unfortunate experience with blasting and perchlorate in recent years; two private wells were contaminated with perchlorate within six months of a blasting event associated with the Ellsworth Village project. Given that there are private drinking water wells near the project site, the proponent should be required to pay for before-and-after testing of these potable water supplies, and should be required to pay for appropriate treatment in the case that any wells become contaminated. Given the scope of the project, the cost of testing and treatment would be negligible. There are still some blasting agents, e.g. ANFO, that can contain significant amounts of perchlorate as a contaminant from Chilean components that are not reflected on Material Safety Data Sheets.

5.33

Appendix F – Application for Permit to Discharge to Groundwaters of the Commonwealth

Section D, Facility Information. Item 3. "752 age restricted" is the first mention of number of bedrooms. If there are 175 units in this development, that gives an average of 4.29 bedrooms/unit. What does "age restricted" mean? If this development is for over-55 ownership with no children under 18, these units have room for a couple and three college students home for the summer, with perhaps an occasional "failure to launch". Trip estimates should be adjusted accordingly, and possibly water usage figures.

5.34

5.35

Section D, Facility Information. Item 4. Design flow is noted at 60,000 gpd, 12 months/year, seven days/week.

Section D, Facility Information. Item 6. "Discharge to existing Title V leaching field (10,000 gpd) and proposed drip irrigation fields. It is highly questionable, if not physically impossible, that drip irrigation fields could accommodate 5/6 of the discharge; alternate leaching facilities need to be designed and constructed. Water withdrawal figures for irrigation should also be adjusted.

5.36

5.37

Section D, Facility Information. Item 8B. "No" is checked as an answer to "Are any hazardous wastes generated?" Are pesticides and herbicides, used on the golf course, and sanitizers used in a restaurant, and their residues hazardous wastes?

5.38

Appendix H

“The Residences at Quail Ridge consists of 174 residential dwelling units...”
This is the first mention of the number 174; previous sections of the document mention either 170 or 175 units.

5.39

Additional Comment – Health Effects of Pesticides

The proposed project creates housing for over-55 individuals in close proximity to a golf course. Traditionally maintained golf courses, as QRCC has been, employ a variety of pesticides and herbicides. “Pesticide exposure may also be associated with increased risk of Parkinson disease; several classes of pesticides, including insecticides, herbicides, and fungicides, have been implicated.”⁷ “Parkinson's disease (PD) is typically thought to be a disorder of the elderly. The average age of onset for Parkinson's disease (PD) is approximately 58 years in the U.S. and elsewhere.”⁸ Care should be taken to prevent residents' exposure to pesticides, herbicides, and fungicides used in turf maintenance.

5.40

⁷ Environ Health Perspect. 2004 Jun ;112 (9):950-8 15198914 [Cited: 3] Association of pesticide exposure with neurologic dysfunction and disease. Freya Kamel , Jane A Hoppin .
<http://lib.bioinfo.pl/pmid:11100151/pmid/cit> accessed 1/5/08

⁸ Michigan Parkinson Foundation. “Young-Onset Parkinson's Disease”.
http://www.parkinsonsmi.org/facts_young.asp accessed 1/5/08

36

Sally Edwards
14 Freedom Farm Road
Acton, MA 01720

RECEIVED

January 28, 2008

JAN 29 2008

Secretary Ian A. Bowles
Executive Office of Energy
And Environmental Affairs
100 Cambridge Street
Boston, MA 02114

MEPA

Re: Quail Ridge Country Club
Notice of Project Change
EOEA #12503

Dear Secretary Bowles,

Thank you for the opportunity to comment on the above referenced Notice of Project Change. I have reviewed the comments submitted by Carol Holley and concur with her concerns. I have attached the Section-by-Section Comments she prepared.

I respectfully request that you require the proponents to address the concerns Ms. Holley and other citizens have raised, as this project will have significant impacts on many aspects of quality of life and the environment in Acton.

Sincerely,


Sally Edwards



THE COMMONWEALTH OF MASSACHUSETTS
EXECUTIVE OFFICE OF TRANSPORTATION

COMMENT LETTER #6

BG

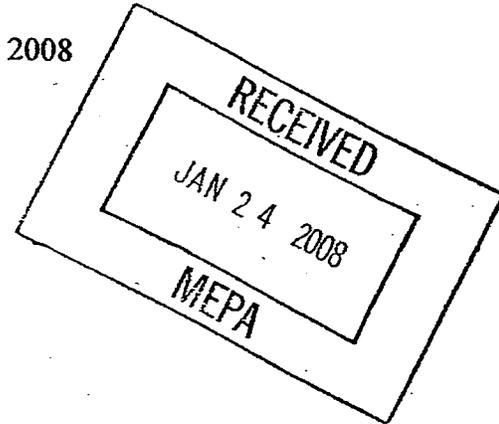
EOT

DEVAL L. PATRICK
GOVERNOR

TIMOTHY P. MURRAY
LIEUTENANT GOVERNOR

BERNARD COHEN
SECRETARY

January 17, 2008



Ian A. Bowles, Secretary
Executive Office of Energy and Environmental Affairs
100 Cambridge Street, Suite 900
Boston, MA 02114-2150

RE: Acton - Quail Ridge Country Club - NPC
(EOEEA #12503)

ATTN: MEPA Unit
William Gage

Dear Secretary Bowles:

On behalf of the Executive Office of Transportation, I am submitting comments regarding the proposed Quail Ridge Country Club project in Acton, as prepared by the Office of Transportation Planning. If you have any questions regarding these comments, please call J. Lionel Lucien, P.E., Manager of the Public/Private Development Unit, at (617) 973-7341.

Sincerely,

David J. Mohler
Acting Deputy Secretary for Planning

DEP mention
Please
Sr. h...
W/412

DJM/jll

cc: Luisa Paiewonsky, Commissioner
David Anderson, P.E., Acting Chief Engineer
Thomas Waruzila, District 3 Highway Director
Neil Boudreau, State Traffic Engineer
PPDU files
MPO Activities files
Planning Board, Town of Acton
Metropolitan Area Planning Council
Boston Region Metropolitan Planning Organization

COMMENT LETTER #6

COMMONWEALTH OF MASSACHUSETTS
EXECUTIVE OFFICE OF TRANSPORTATION AND PUBLIC WORKS
OFFICE OF TRANSPORTATION PLANNING

MEMORANDUM

TO: David J. Mohler, Acting Deputy Secretary for Planning
Executive Office of Transportation

FROM: J. Lionel Lucien, P.E., Manager
Public/Private Development Unit

DATE: January 15, 2008

RE: Acton – Quail Ridge Country Club – NPC
(EOEEA #12503)

The Office of Transportation Planning has reviewed the second Notice of Project Change (NPC) for the Quail Ridge Country Club project in Acton. The project is located on an approximately 154.7-acre parcel that borders the west side of Route 2A/119 (Great Road) in Acton. In the previous NPC, dated October 25, 2003, the project entailed the construction of an 18-hole golf course, including a clubhouse and related infrastructure and maintenance facilities associated with the development. The current project change includes an increase of 378,850 square feet of development for a total of 419,350, and the construction of 170 new residential units. Based on information included in this NPC, the project is estimated to generate an additional 198 new vehicle trips on an average weekday, for a total of 838. A MassHighway permit is required for access to Route 2A/119.

MassHighway issued a Section 61 Finding for the original project on July 24, 2002. A subsequent NPC was submitted on October 25, 2003 for which no additional MEPA review was required based on traffic, as the changes did not affect the original traffic impacts of the project and presented no material changes to the development program.

The current NPC does not significantly change the traffic impacts originally associated with the project; however, the proponent should work with MassHighway to address the impacts of the Route 2A left turns into the site drive. In addition, we recommend that the proponent investigate public infrastructure connections to the Massachusetts Bay Transit Authority, Commuter Rail Fitchburg Line, to reduce site generated traffic.

6.1

6.2

If you have any questions regarding these comments, please contact me or Melody Graves of the Public/Private Development Unit at (617) 973-7344.

COMMENT LETTER #7

30



The Commonwealth of Massachusetts
William Francis Galvin, Secretary of the Commonwealth
Massachusetts Historical Commission

RECEIVED

January 8, 2008

JAN 9 - 2008

Secretary Ian A. Bowles
Executive Office of Energy & Environmental Affairs
Attn: William Gage, MEPA Unit
100 Cambridge Street, Suite 900
Boston, MA 02114

MEPA

RE: Quail Ridge Country Club, Acton, MA. MHC #RC.28633, EOE #12503

Dear Secretary Bowles:

Staff of the Massachusetts Historical Commission have reviewed a Notice of Project Change (NPC) for the project referenced above. The proposed project change consists of the construction of a 170-unit Senior Residence known as The Residences at Quail Ridge (TRQR), and associated infrastructure at Quail Ridge Country Club in Acton. The plan for the wastewater disposal system (NPC, Appendix G) was not included in the copy of the NPC submitted to the MHC.

As you know, MHC previously reviewed the ENF, FEIR and a NPC for this project in 2002 and 2003. An intensive (locational) archaeological survey (950 CMR 70) conducted for the project identified potentially significant historical archaeological sites, including fourteen historic quarry locations, a stone platform, a stone bridge abutment, and a historic farmstead known as the Quail Ridge Farm/Homestead Site, since recorded in the Inventory of Historic and Archaeological Assets of the Commonwealth (MHC # ACT.HA.2, 3, and 4).

The FEIR included a summary of the archaeological survey findings, and indicated (FEIR, pp. 1-5, 6-4) that further consultation would occur with the MHC to assist in addressing project impacts to the archaeological sites.

MHC's (3/25/2002) comments on the FEIR recommended that the potentially significant archaeological sites be avoided during construction through the implementation of an archaeological site avoidance and protection plan. If the sites could not be avoided, an archaeological site examination (950 CMR 70) and photodocumentation and field survey was requested.

The Secretary's Certificate on the FEIR (4/1/2002) included consultation with the MHC to develop mitigation measures to resolve project effects to the archaeological sites. MHC has not been contacted since the review of the FEIR.

Review of aerial photographs and NPC (page 41, section 7, Archeological Resources) determined that construction of the proposed 18-hole golf course has proceeded. Quarry stones bearing markings and drill holes have been used as landscape features and tee markers and are proposed to be reused in the TRQR portion of the project area for trailheads, street signs, numbering and landscape features. The presently proposed TRQR is located in areas with historic resources.

MHC is unable to determine the present condition of the archaeological sites, so that MHC can offer comments to assist to avoid, minimize, or develop suitable mitigation measures.

MHC requests that an archaeological site inspection survey be conducted by a qualified cultural resource management firm, to document the current condition of the archaeological sites and to offer recommendations. The report of the survey should include scaled project plans showing existing and proposed conditions for the project, including the associated infrastructure with the locations of the archaeological sites clearly indicated.

7.1

The FEIR indicated that a US Army Corps of Engineers permit was required for the project. The TRQR also includes a wetlands crossing, but the NPC does not indicate that a Corps permit is required. MHC requests that the project engineer clarify the status of the Corps permitting, and whether or not a Corps permit is required for the TRQR project. If so, the Corps will consult with the MHC on the project effects to the archaeological sites.

7.2

These comments are provided to assist in compliance with Section 106 of the National Historic Preservation Act of 1966, as amended (36 CFR 800), Massachusetts General Laws Chapter 9, Sections 26-27C (950 CMR 70-71) and MEPA (301 CMR 11). Please feel free to contact Jonathan K. Patton at this office if you have further questions or require additional information.

Sincerely,



Brona Simon
State Historic Preservation Officer
Executive Director
State Archaeologist
Massachusetts Historical Commission

xc: Ronald Peabody, Quail Ridge Country Club, LLC
Arthur P. Bergeron, Law Office of Arthur P. Bergeron
Karen Kirk-Adams, USACOE-Regulatory
Kate Atwood, USACOE
DEP-CERO-Wetlands
Acton Conservation Commission
Acton Historical Commission

COMMENT LETTER #8

B6

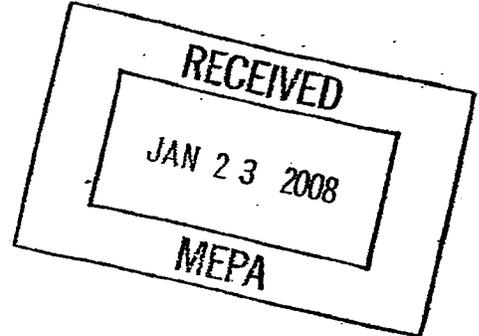
ANDERSON & KREIGER LLP

DOUGLAS H. WILKINS
dwilkins@andersonkreiger.com
Direct phone: 617-621-6580
Direct fax: 617-621-6680

January 23, 2008

BY HAND DELIVERY

Secretary Ian Bowles
MEPA Office
Executive Office of Energy and
Environmental Affairs
100 Cambridge Street, Suite 900
Boston, MA 02114
Attn: William Gage



EOEA No. 12503
(Notice of Project Change filed by Quail Ridge Country
Club for A Golf Course and Residential Development at
354B Great Road, Skyline Drive, Acton, MA)

Dear Secretary Bowles and Mr. Gage:

The Town of Acton ("Town") submits these comments in response to the Notice of Project Change ("NPC"), published on December 24, 2007, regarding the proposed development by Quail Ridge Country Club ("Quail Ridge") in Acton, Massachusetts. The Town requests that the Secretary require Quail Ridge to file a Supplemental Final Environmental Impact Report ("SFEIR"). It also provides comments that it hopes the Secretary will find helpful in drafting the scope for the SFEIR.

1. The NPC Itself is deficient.

The NPC does not state how much water the applicant proposes to withdraw. Instead, it states that this is "[t]o be decided in DEP Water management Act permit." The time for disclosing this information, however, is when the NPC is filed. That is particularly true where there have been enforcement problems with this applicant regarding excessive water withdrawal both under state regulations (Commonwealth v. Quail Ridge LLC, Middlesex No.07- 2398-C (consent decree)) and under the Town's permit, under which a notice to show case was issued. This history is discussed in detail under item 4, below.

8.1

If Quail Ridge decides (again) that its revised project will be below the amount needed to trigger a Water Management Act permit application, then the amount may never be "decided"

publicly.¹ The Secretary should apply the MEPA regulations, and exercise discretion, declaring the NPC inadequate. That will ensure that these numbers are pinned down now, before any commitments are made or any reliance occurs.

2. **A SFEIR is Mandatory.**

The NPC reveals a net increase of 19.56 acres of impervious area to be created, compared to the previously-reviewed FEIR, which proposed only 3.84 acres of impervious area. A SFEIR is mandatory under 301 CMR 11.03(1), which reads:

(1) **Land.**

(a) **ENF and Mandatory EIR.**

* * *

2. Creation of ten or more acres of impervious area.

The new proposal crosses this threshold, whether the Secretary considers the total impervious created or only the increase from the original FEIR (i.e. an increase in impervious area of 13.06 acres). The Town trusts that crossing the threshold for creation of over ten acres of impervious area will trigger an EIR. The Town therefore concentrates (in the next paragraphs, and in the remaining sections of this letter) on those areas that may be more discretionary and that will, in any event, need to be considered in drafting the scope for the SFEIR.

The increased impervious surface creates a critical need for mitigation to maintain or improve recharge of the local watershed, since the site is located within the "Highly Stressed" Nashoba Brook Watershed. It also necessitates a comprehensive review of run off, drainage, wetlands impacts, drinking water effects and all other environmental consequences of creating this impervious area, as well as alternatives to doing so, including the original 18 hole golf course, which itself requires additional analysis as discussed below. The Town's Health Department would also like to see analysis of a potential a surface water quality sampling point with permanent access -- along Nagog Brook, near the pond, to augment its current water quality surveillance program.

The Secretary should require the applicant to evaluate reuse of the treated wastewater for irrigation or pond augmentation. The Quail Ridge property is located directly adjacent to Needs

¹ Assuming that Quail Ridge's withdrawals trigger a filing, it will have to comply with the regulations promulgated under 21G, § 3, which appear at 310 CMR 36.00. In particular, the Application must comply with the provisions for a "new withdrawal", which the regulations define as follows:

New withdrawal means any withdrawal of water which is not an existing withdrawal [i.e. the average volume of water withdrawn during the five years prior to January 1, 1986, if a registration statement was filed by January 1, 1988]. New withdrawal includes, but is not limited to, an increase above a registered withdrawal in excess of the threshold volume.

310 CMR 36.03.

8.2

8.3

8.4

Planning Area 2 from the recently completed Acton Comprehensive Water Resources Management Plan. This area, although identified as a "Low Priority Area", was identified as an area with a need for a wastewater disposal solution other than relying on its current approach of onsite wastewater systems and a patchwork of privately-owned and operated package wastewater treatment plants. During the early discussion of this project, the Health Department requested that the developer work in conjunction with the Town to identify areas at the site where additional wastewater volumes, above and beyond the requirements for the development, could be disposed. The Health Department wishes to continue these talks, in conjunction with a discussion on reuse of the treated wastewater for irrigation and other innovative and beneficial water management practices.

8.5

3. **The Supplemental FEIR should address traffic issues.**

Because the project already triggered an FEIR, it is proper to ask that changes in the project, namely inclusion of a residential subdivision, receive further analysis. The Secretary's April 1, 2002 certificate specifically called for an NPC if Quail Ridge "revises its Preferred Alternative to be a residential subdivision ..." The Secretary properly foresaw that a change to a residential development might significantly alter the environmental impacts of the project. While it would have been premature to require a supplemental FEIR for the residential alternative in 2002, the facts presently confirm the need for an SFEIR.

The shift from 18 hole golf course to a 9 hole course plus residential development raises significant traffic issues that should be of concern to MassHighway and the public. They are certainly of concern to the Town.

a. *MEPA Thresholds.*

The Project proposes a substantial increase in parking spaces (now proposed to be 798) and in vehicle trips per day. It triggers one or both of the following thresholds for filing a NPC and for an EIR if the Secretary requires:

14. Generation of 1,000 or more New adt on roadways providing access to a single location and construction of 150 or more New parking spaces at a single location.

15. Construction of 300 or more New parking spaces at a single location.

301 CMR 11.03(6).

The "previously reviewed" FEIR did not involve a proposal that triggered these thresholds, as it contemplated only 205 parking spaces and 640 vehicle trips. Now, the net increase in parking spaces (593) from the original FEIR to the present proposal, as disclosed in the NPC, nearly double the amount set forth in item 11.03(6)(15). The resulting total number of parking spaces (798) nearly triple the threshold.

The vehicle trips may provide a separate and independent (albeit unnecessary) basis for requiring a SFEIR. The NPC claims that vehicle trips per day will be 838, which is already 83.8% of the threshold. However, the Town questions that number. Any increase in the applicant's calculations would closely approach or exceed the 1000 vehicle per day figure in the threshold.

b. Impacts Upon State Roads and the Town.

The volume of traffic and the availability of parking will affect the Town and state roads. MassHighway owns Great Road, which is designated as state route 119 and 2A (concurrently). It appears that, whatever access is chosen, all access alternatives would directly or indirectly enter and exit from this State Highway.

Route 27, which intersects at a light about 600 feet east from Skyline Drive (a certain project access point) is a County/Town way. The proximity of Skyline Drive to the 2A/27 intersection is also a concern, although the applicant's traffic consultant predicted no interference. The existing LOS F for side streets to 2A/119, will get worse with this project. Quail Ridge should provide the analysis on projected impacts and alternatives that would permit MEPA, MassHighway and other agencies to take a closer look at the alternatives for avoiding, minimizing or mitigating project impacts on the 2A/27 intersection and Great Road. A supplemental FEIR should provide data, analysis and proposed alternatives relating to anticipated traffic operations on Great Road. (8.6)

To date, Quail Ridge has made Skyline Drive the primary access to the site and Acom Park Drive via Hazelnut Street and Palmer Lane emergency access only. The Applicant is proposing to reconfigure Skyline Drive at Great Road to include a left turn lane and a right turn lane. The Applicant's traffic consultant decided not to propose a second access. That consultant stated that as proposed, the Skyline Drive/Great Road intersection and the nearby Great Road intersections will remain at Levels of Service (LOS) F. But the Town has not received more details as to queue length, waiting times, etc. The Town is skeptical that a functional solution has been proposed. (8.7)

The Town cannot require substantive improvements on Great Road without acknowledging MassHighway's ultimate jurisdiction on this roadway. Any special permit condition that the Board may require within the Great Road layout must be waivable, i.e. subject to MassHighway's determination, which, in turn should only be made with the benefit of additional environmental review on traffic.

4. **The History Regarding Alleged (But Incorrect or Inadequately Studied) Water Supply Impacts Shows the Need for a supplemental FEIR on water withdrawal and drinking water issues.**

Given the lack of information in this NPC, prior MEPA documents and administrative filings, it is impossible to discern what impact approval of this project would have on all other competing water sources, withdrawal points and water providers. The proposed irrigation uses should be subordinate to all drinking water uses. No agency should consider approving this (8.8)

Project unless the applicant proves that the withdrawals will have no impact on any drinking water well.

The history of this project demonstrates that the only way that the Town and the public will ever get the information they need is through the MEPA process. For about 6 years now, the information has either been inaccurate or not forthcoming. The present notice of project change should trigger a SFEIR, disclosing and analyzing the relevant facts and data.

The FEIR for the project was filed on February 15, 2002, noticed in the Monitor on February 23, 2002 and certified on April 1, 2002. Quail Ridge filed an application with DEP for water withdrawal, which DEP found incomplete in an "order to complete" dated April 15, 2003, attached as Exhibit A.

A notice of project change, allegedly reducing water withdrawals allegedly below 100,000 gpd due to mitigation measures, was filed on October 9, 2003, attached as Exhibit B. The notice effectively waived the FEIR certificate as to water withdrawal issues, which no longer required a permit and no longer triggered MEPA thresholds for water withdrawal (see 11.03(4)(b)(1), quoted below), according to the NPC.

The claim that water withdrawals would be below 100,000 gpd turned out not to be true. Quail Ridge entered into a consent decree with the Commonwealth, signed on June 1, 2007, which was filed in the Middlesex Superior Court, due to excessive water withdrawals totaling as much as 12 to 13 million gallons of water from the wells in numerous 90 day periods during 2005 and 2006. See Exhibit C, attached. It turned out that, instead of withdrawing its water management act permit application in 2003, Quail Ridge should have documented the facts and requested a permit for the amounts that it actually withdrew.

Then, in August 2007, Quail Ridge filed an application with DEP requesting permission to withdraw 26 million gallons (0.121495 MGD for 214 days per year). No FEIR for the actual amount of water used (as determined in the consent decree), or the amount now requested had ever been filed. Among the comments that Acton made to DEP in 2007 was the need for additional MEPA review, including an NPC and SFEIR. On November 26, 2007, DEP issued another "notice to complete," attached as Exhibit D.

The information provided to DEP in Quail Ridge's 2007 submission was from tests in 2001 and 2002. Since the applicant had been withdrawing water for some time, without a permit, new data should exist regarding impacts of water withdrawals. If Quail Ridge now contends (again) that its new proposal brings it below the threshold for a water withdrawal permit, then this critical question regarding environmental impact of the project may never be addressed. (8.9)

5. The Wastewater Treatment System Issues Need Disclosure and Analysis

The applicant has not submitted any information to the Massachusetts Department of Environmental Protection regarding the design or construction of the wastewater treatment facility. Without this information, the Health Department cannot definitively state that the (8.10)

project as proposed is viable and will comply with wastewater regulations. The Town's Health Department has several questions and concerns regarding the wastewater system for the project. Discussion of the basic proposal, impacts and alternatives is essential for protection of the environment. The Health Department's detailed concerns are set forth in its memorandum to the Planning Board, attached as Exhibit E.

8.10
cont.

The main thread of the Health Department's comments is that the applicant has not sufficiently fleshed out the Treatment Plant proposal in a way that permits assessing (1) whether it is feasible to construct the number of housing units proposed without exceeding plant capacity or (2) the potential impacts to Nagog Pond, the Water District's Conant well fields and the several private water sources in the area.

6. The 18 Hole Golf Course Alternative itself triggers a SFEIR.

While the present NPC only appears to address one option (9 hole golf course and residential subdivision), it does not appear that Quail Ridge has ever abandoned its option to build the 18 hole golf course, with the water withdrawals requested in its DEP application of August, 2007. That alternative needs to be the subject of this NPC and must be evaluated with the alternative that Quail Ridge has selected for inclusion in its NPC.

8.11

With the 18 hole golf course still a viable alternative, the proponent is contemplating an increase in water withdrawal compared to the original FEIR (26 million gpy versus 24 gpy) and compared to the NPC (less than 100,000 gpd, pumping only during a portion of the year). Since the wells were constructed more than 3 (indeed more than 5) years ago and the project, as defined by the 2003 NPC did not include any jurisdictional water withdrawals, the project is also subject to either an entirely new ENF or a SFEIR. See generally 801 CMR 11.10(2)(b)(1), (3)(b)(1).

The review thresholds for water withdrawal, appearing at 801 CMR 11.03 are:

(4) Water.

* * *

(b) ENF and Other MEPA Review if the Secretary So Requires.

1. New withdrawal or Expansion in withdrawal of 100,000 or more gpd from a water source that requires New construction for the withdrawal.

The definition of "New" work is (810 CMR 11.02):

New. Any work or activity that is not:

- (a) existing;
- (b) being carried out currently as part of, used by, or generated by a previous, actual or permitted use of the Project site; or
- (c) being carried out within three years since the later of discontinuance of the previous use or issuance of the relevant Permit.

The request for 26 million gallons per year for the 18 hole golf course, by withdrawing 121,495 gallons per day (for 214 days) exceeds the threshold by over 21%. This is a new withdrawal and a new activity. The Secretary should require an SFEIR.

CONCLUSION

As noted above, the project changes themselves trigger at least one mandatory EIR threshold and one or two discretionary thresholds. In addition, the project's gross square footage will increase from 40,500 (previously reviewed) to 378, 850 square feet, for a total of 419, 350 square feet. This more than 9-fold increase presents building-related project impacts that are literally an order of magnitude greater than considered in the original FEIR. This easily meets the test for requiring an FEIR, even if the project did not trigger numerous review thresholds:

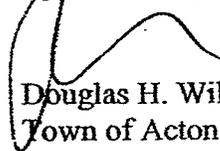
(6) Secretary's Consideration of Environmental Consequences. In determining whether a change in a Project or the lapse of time might significantly increase environmental consequences, the Secretary shall consider the following factors:

(a) Expansion of the Project. A change in a Project is ordinarily insignificant if it results solely in an increase in square footage, linear footage, height, depth or other relevant measures of the physical dimensions of the Project of less than 10% over estimates previously reviewed, provided the increase does not meet or exceed any review thresholds.

(b) Generation of further impacts, including an increase in release or emission of pollutants or contaminants during or after completion of the Project. A change in a Project is ordinarily insignificant if it results solely in an increase in impacts of less than 25% of the level specified in any review threshold, provided that cumulative impacts of the Project do not meet or exceed any review thresholds that were not previously met or exceeded.

301 CMR 11.10(6). The Secretary therefore should and, indeed must, require a SFEIR with at least the scope suggested above.

By its attorney,



Douglas H. Wilkins
Town of Acton

cc: Quail Ridge
Roland Bartl
Douglas Halley
John Murray

SECTION 12

SECTION 12 RESPONSE TO COMMENTS

12.1 Public Comment Letters

Assigned #/Author, Date

1. DEP/CERO, dated January 22, 2008
2. Acton Citizens for Environmental Safety (ACES), dated January 25, 2008
3. Organization for the Assabet River (O.A.R.), dated January 29, 2008
4. Debra Andell, January 28, 2008
5. Carol Holley, dated January 14, 2008 (Identical comment submitted by Sally Edwards January 28, 2008)
6. Massachusetts Executive Office of Transportation, dated January 17, 2008
7. Massachusetts Historical Commission (MHC), dated January 8, 2008
8. Anderson & Krieger, LLP, (Town of Acton) dated January 23, 2008

12.2 Response to Comments

Comment Numbers	Comment Summary	Response
	Comment Letter # 1 DEP/CERO, dated January 22, 2008	
1.1	Since MassDEP cannot issue the permit until the MEPA process is completed the NPC should include both Phases II so that [wastewater issues of] both phases can be commented on together.	There are two construction phases planned for the building of TRQR. Phase 1 includes the construction of the sewage treatment plant and, roughly, half the units planned for the eastern section of the project. Phase II involves construction on the western half of the project. The restaurant construction at the SCS begins at the end of Phase I and ends midway through Phase II. The dividing line between the two phases is at the Nagog Brook crossing.
1.2	The NPC states that the flows for an assisted living facility are 75 gpd per bedroom that is incorrect; they are 150 gpd per unit. The estimated flows must be increased for Phase II in the groundwater permit.	As shown on Table 6-1, the estimated wastewater flow for TRQR is 57,835 gpd. This is based on 174 units – 486 bedrooms - at 110 gpd per bedroom (86, 3-bedroom single family units; 26 duplex style, 3 bedroom units; 36, 2-bedroom units), 4 tennis courts, a 54-seat restaurant, 42 lockers, a 1,200 SF clubhouse, 12 maintenance workers, and 1,500 SF of retail space.
1.3	The number of proposed units is different throughout the report... The exact number of units to be built must be clarified.	TRQR will consist of: <ul style="list-style-type: none"> • 86 single family, 3 bedroom units (86 units) • 26 duplex style, 3 bedroom units (52 units) • 3, 12-unit, 2 bedroom units (36 units) The total number of units for TRQR is 174.
	The proponent will be required to submit a minimum of a simplified wildlife habitat	The simplified wildlife habitat evaluation form, included in

1.4	evaluation form in accordance with the procedures in the Massachusetts Wildlife Habitat Protection Guidance for Inland Wetlands dated March 2006.	Appendix D, does not indicate any impact.
1.5	The proponent will be required to submit a 401 Water Quality Certification (WQC) application to MassDEP or file a deed restriction in accordance with 314 CMR 9.00.	A deed restriction will be filed in accordance with 314 CMR 9.00.
1.6	MassDEP recommends the proponent propose Riverfront Area plantings or enhancements given the new work proposed in the Notice of Intent and NPC as mitigation for work in Riverfront Area	Virtually all of the Riverfront Area will remain vegetated.
1.7	DEP is waiting for response to an OTC relative to the Water Management permit application.	QRCC has been working with DEP and the OTC will be submitted to DEP in July, 2008.
1.8	A revised s.61 Finding should include additional stormwater and water mitigation measures.	The Section 61 Findings have been revised to include additional stormwater and water mitigation measures, as appropriate. See SECTION 11, MITIGATION/ SECTION 61 FINDINGS AND COMMITMENTS.
	Comment Letter 2 Acton Citizens for Environmental Safety (ACES), dated January 25, 2008	
2.1	How can drip irrigation lines that will benefit the turf be used in the winter? How can drip irrigation lines that are below the frostline benefit the bentgrass? No details are provided on the role of the "reserve fields" shown on the figure in Appendix G. Are these areas...for later contingency purposes, or will they be developed before building occupancy, as conventional leaching fields...?	As discussed in section 6.4, Geoflow systems can be used year round in all climates. The drip line self drains and does not hold water keeping the system working even in the coldest climates. The system, as designed, will not be used for turf irrigation purposes. A detailed review of the design and performance of drip dispersal systems in freezing environments is provided in Appendix B. The reserve fields depicted on the wastewater design plans are for contingency purposes, as required by the Ground Water Discharge Permit Program (314 CMR 5.00).
2.2	Given the proximity of the proposed "over-55" development to both public and private water supplies, please consider requiring action, such as resident education, to ensure reduction/prevention of ground water contamination with drugs.	The proponent will take aggressive measures to prevent residents from improperly disposing of drugs and medicines. The following will be instituted: <ul style="list-style-type: none"> • Educational information will be provided to buyers at the time of closing and signatures of receipt will be required. • An educational program will be instituted within the condominium association including mailers and occasional seminars to fully educate the residents of the Quail Ridge community on the state of the art treatment facility.

2.3	[Although Perchlorate not to be used as blasting agent.] Given that there are private drinking water wells near the project site, the blaster should be required pay for before- and after- blasting testing of nearby public and private wells, and should be required t pay for appropriate treatment in the case that any wells become contaminated.	Perchlorate, a blasting agent, has been suspected of seeping into and contaminating groundwater when used on other construction projects. Therefore, QRCC will <i>not</i> use Perchlorate as a blasting agent at any time in its construction of TRQR. Please see Sections 8.3.5 through 8.3.5.2.
2.4	Pesticide and herbicide use on the golf course should be executed in such a way as to minimize impact on the residential section of the project ...and care should be taken that golf course maintenance practices do not adversely impact [nearby] public and private water supplies.	The approved IPM Plan for QRCC 18-hole golf course will continue to be in effect for the remaining 9-hole golf course. Please see the FEIR, Appendix C, Integrated Pest management Plan and Related Attachments, and; the NPC Appendix E, Comprehensive Reporting Matrix.
	Comment Letter #3 Organization for the Assabet River (O.A.R.), dated January 29, 2008	
3.1	[Since Nashoba Brook - to which Nagog Brook is a tributary - is classified as hydrologically stressed.] OAR is particularly concerned with proposals, which may diminish the summer and fall base flow of Nagog Brook through groundwater withdrawals or increases in impervious area. How much water will be withdrawn for irrigation, which wells will be used, and what is the impact from withdrawals?	The ACO for the QRCC 18-hole golf course stipulates that water withdrawal levels may not exceed 99,000 gpd from one (1) well. Monitoring has not indicated any adverse environmental impacts. TRQR will eliminate 9 holes from the 18-hole golf course. This reduction, by half, of the golf course will correspond to an approximately 40% reduction in water withdrawals (roughly 39,500gpd). Any potential environmental impacts, therefore, are reduced by roughly 40%. Please see Sections 7.1 through 7.1.2 for additional information.
3.2	Explain the connection between the 2007 Water Management Act application for withdrawals of irrigation of an 18-hole golf course and MassDEP's subsequent issuance to Quail Ridge of an Order to Complete.	See response to comment 1.7
	Comment Letter #4 Debra Andell, January 28, 2008	
4.1	The reliability of a drip irrigation system as a means of waste water disposal for up to 50,000 gallons per day, especially given our climate, is questionable...Drip irrigation lines that will benefit the turf cannot be used in winter.	As discussed in section 6.4, Geoflow systems can be used year round in all climates to dispose of wastewater flows well in excess of 50,000 gpd. The system, as designed, will not be used for turf irrigation purposes. See also response to Comment2.1
4.2	The proposed project creates housing for over-55 individuals in close proximity to a	See response to Comment 2.2

	golf course, where pesticide and herbicide use are abundant. This area is also between two public water supplies and close to some private drinking water wells, potentially threatening these water supplies.	
	Comment Letter #5 Carol Holley, dated January 14, 2008	
5.1	Acres of land altered [section 1 of NPC form] - if drip irrigation is introduced into the 9-hole golf course, does this alter the land on that section of the project? What constitutes an "alteration?"	All land that is to be disturbed by construction activity in connection with the Residences at Quail Ridge has been considered in the Altered Land calculation, including the drip irrigation fields.
5.2	Number of units [section 1 of NPC form] – this number is sometimes 170, sometimes 175, and also 174 in various sections and appendices of the document.	TRQR will consist of: <ul style="list-style-type: none"> • 86 single family, 3 bedroom units (86 units) • 26 duplex style, 3 bedroom units (52 units) • 3, 12-unit, 2 bedroom units (36 units) The total number of units for the TRQR is 174. See also Response to Comment 1.3.
5.3	Are the use of the Golf Course and the 7,500 SF restaurant for the benefit of the Condominium owners only? Traffic projections will change radically if they are not? [Do these uses comply with appropriate Acton zoning by-laws?]	The Quail Ridge Country Club (QRCC) will remain as members-only, but membership will not be limited to condominium residents. The 54-seat restaurant was assumed to generate 15 percent of its patronage from non-club members and non-condominium residents. The 15 percent figure was based on the QRCC generating only 15 percent of its revenues from outside sources. The trip generation of both uses was added to the existing traffic estimated to be generated by the QRCC.
5.4	"The entire site will be pedestrian friendly" [citing from NPC] - however, there is no continuous pedestrian connectivity to nearby commercial areas of Acton....	A sidewalk is proposed along Skyline Drive. It will provide a direct pedestrian connection from the development to the sidewalk along Great Road. The sidewalk on Great Road is connected directly to the nearby commercial areas.
5.5	[The Traffic Impacts] section notes that there will be "approximately 175 units of age restricted housing" and the restaurant will have "35 to 50 seats"... This is the first introduction of the number 175 for housing units. A 50-seat restaurant seems large for an establishment created "primarily for the use of an under-200 unit development, in accordance with the current Acton Zoning Bylaw.	The restaurant will serve as a reservation-only facility primarily serving the condominium residents and the QRCC members. As stated, 15 percent of the restaurant patrons were assumed to be from outside sources. See also Response to Comment 5.3.
5.6	The NPC states that "existing transportation conditions in the study area were assessed in February 2007 and	October 2007 traffic counts were not used as the basis for the traffic analysis.

	again in October 2007." Although February 2007 data was provided, October 2007 traffic volumes and data were not included in NPC. October data should be provided if it indeed was assessed.	
5.7	What did the October traffic volumes show? If they were not analyzed, why not?	Traffic counts do not show a growth rate. A growth rate is determined by comparing the seasonally adjusted traffic volumes to available historical traffic data from recent years past. The October traffic counts were not used for analysis purposes and therefore were not compared to historical traffic data to determine a growth rate. See also Response to Comment 5.6.
5.8	[The Traffic Impacts Section of the NPC] only refers to Acton-based development...Upstream communities, particularly Littleton, Groton, should have been contacted to determine if there were any development projects that might affect future traffic volumes in the study area.	Potential developments in neighboring communities are accounted for in the applied growth rate. Acton-specific projects are included as a separate component since it is likely that these traffic volumes will not follow the same directional breakdown as the existing volume (i.e.) additional left turns at an intersection where the majority of existing vehicles and the vehicles traveling to a neighboring community development would travel straight through the same intersection).
5.9	The number of units should be consistent [or explained clearly] throughout the document. The maximum restaurant seating should be used as the more conservative number.	Conley Associates, Inc. assumed 175 units when calculating the trip generation of the residential development. The number of units is 174; therefore, the trip generation calculations for the residential development are conservative.. See also Responses to Comments 1.3 & 5.2.
5.10	The peak hour trip generation appears to assume that many residents of an over-55 development do not work regular hours...Given the projected demographics, is this a reasonable assumption?	The trip generation calculations assume that 56 trips would occur during the weekday AM peak <i>hour</i> . This represents 56 trips during the peak <i>hour</i> of the commuter peak <i>period</i> . Other residents are expected to travel to work during the commuter peak <i>period</i> , but before or after the peak <i>hour</i> . The trip generation calculations follow standard engineering practice.
5.11	Clarify the nature of the golf course and restaurant users (condominium use v. outside use.)	See Response to Comment 5.3.
5.12	Given the seasonal nature of a golf course and the fact that the existing facility has been underutilized, is it appropriate to assume that the proposed reduction from an 18-hole to a 9-hole golf course will reduce traffic and vehicle	The existing trip generation of the golf course was determined based on the ITE manual, <u>Trip Generation</u> . These traffic estimates were included as part of the baseline Existing condition. The trip generation calculations did not take into account the fact that the membership of the golf course is currently not reaching its goals and assumed the golf course was generating

	trips?	the typical amount of traffic for a golf course.
5.13	Table 3-4 indicates that the restaurant will generate 102 vehicle trips/weekday. The text indicates 674 vehicle trips/weekday. [This] is a significant discrepancy, and it is questionable to assume that most restaurant patrons "would be club members already on site or residents of the new 175 units..." especially given that a club with off-site members is not an explicit part of this proposal.	Table 3-4 of the NPC stated that the restaurant portion of the redevelopment is expected to generate 102 vehicle trips from outside residents and members already on site. As noted in footnote 2, this is based on a 50 seat restaurant.
5.14	It is not noted if the vehicle trip figures for the restaurant are for a 35- or 50- seat establishment [and whether a more appropriate estimate would be] for a potential of up to 200 customers/day? Further it is probable that a restaurant of this size could not be "primarily for its residences", and therefore in violation of Acton's current Zoning Bylaw?	The trip generation calculations in ITE include all trips to a facility, including staff, deliveries, and service. See also Responses to Comments 5.3 & 5.11.
5.15	The development will adversely impact LOS at downstream [southerly] intersections...	The impact at the intersections listed by the commenter (all located further away than the intersections studied) will experience less impact than the intersections that were studied. None of the professional reviewers of this project have questioned the study area chosen for the TIS.
5.16	While the geometry has been improved, sight line issues due to grade and horizontal alignment of Great Road remain. Further, the additional lanes added to Great Road frequently generate more confusion than efficiency in traffic flow...	The available sight distance along Great Road approaching Skyline Drive was measured and meets the minimum Stopping Sight Distance requirements set forth in AASHTO. The MassHighway Stopping Sight Distance requirements equal those of AASHTO. The stop controlled approach of Skyline Drive is to be widened to two lanes. Conley Associates, Inc. does not foresee any confusion for motorists exiting Skyline Drive due to the additional lane. The additional lane will not have any impact on the traffic flow along Great Road.
5.17	The NPC Mitigation Conclusion presents "the figure of 175 units, rather than the 170 units noted in the Section 1 form.	The QRCC will consist of: <ul style="list-style-type: none"> • 86 single family, 3 bedroom units (86 units) • 26 duplex style, 3 bedroom units (52 units) • 3, 12-unit, 2 bedroom units (36 units) The total number of units for the QRCC is 174. See also Responses to Comments 1.3, 5.2, 5.9.
5.18	How does the elevation of the base of box [used for the crossing] relate to potential groundwater elevations?	The footings of the culvert will be below seasonal high groundwater. If groundwater is encountered during construction, standard dewatering techniques will be used, including stilling basins, to facilitate installation.

5.19	Who will monitor success of wetland replication?	The proponent's wetland consultant in conjunction with the Acton Conservation Commission will monitor wetland replication success.
5.20	...there are questions regarding pesticides and herbicides from the golf course that could become airborne or seep into groundwater and adversely impact natural areas.	See Responses to Comments 2.4 and 4.2.
5.21	Are characterizations of soils in the Natural Resources Conservation Services (NRCS) report for Middlesex County – published before construction of the golf course - still valid and are more characterizations available?	The soil characterizations are based on the most current soils information of the NRCS. Prior to site analysis, mapping was confirmed through on-site soil evaluations, surface cover surveys and wetland delineations.
5.22	What will keep clay liner of retention pond from failing in a 100-year storm?	The clay-lined basin is not compromised by a 100-year storm event. If the clay liner leaked, runoff from the storm would actually be further mitigated by infiltration.
5.23	It would be nice to see some Low Impact Development (LID) Integrated Management Practices incorporated into plan.	As discussed in Section 5, extensive contemporary LID principles and practices have been incorporated into the design of the stormwater management system.
5.24	Will the O&M plan for the stormwater system be subject to review by an outside party?	The Acton Engineering Department and the Acton Conservation Commission and its staff reviewed the O&M Plan.
5.25	Water quality monitoring results and water withdrawal records have not yet been submitted for review. How will submission of these records to environmental reviewing parties be handled in the future in order to ensure they occur?	Water quality monitoring results and water withdrawal records have been submitted for review. QRCC is subject to an ACO with very stringent reporting guidelines. Reports are issued to both DEP and the Town of Acton.
5.26	The figure of 170 units is used in this [Section 6 – Potable Water and Wastewater Disposal] section; water use would increase if 175 units are constructed.	As shown on Table 6-1, the estimated wastewater flow for TRQR is 57,835 gpd. This is based on 174 units – 486 bedrooms - at 110 gpd per bedroom (86, 3-bedroom single-family units; 26 duplex style, 3 bedroom units, and 36, 2-bedroom units), 4 tennis courts, a 54-seat restaurant, 42 lockers, a 1,200 SF clubhouse, 12 maintenance workers, and 1,500 SF of retail space. See also Responses to Comments 1.3, 5.2, 5.9, 5.17.
5.27	The number of bedrooms per unit or total number of bedrooms in the development...would have been appropriate to introduce in this section.	TRQR will consist of: <ul style="list-style-type: none"> • 86 single family, 3 bedroom units (86 units) • 26 duplex style, 3 bedroom units (52 units) • 3, 12-unit, 2 bedroom units (36 units) The total number of units for the TRQR is 174 and the total number of bedrooms is 486.

		See also Responses to Comments 1.2 and 5.26.
5.28	The 50-seat [restaurant] figure is appropriately used here...the number of residential units has dropped from 175 to 170, and the number of bedrooms/unit is not noted.	The proposed restaurant will contain 54 seats and there will be a total of 486 bedrooms is 486. See also Responses to Comments 1.3, 5.2, 5.9, 5.17, and 5.26.
5.29	Is there a way, such as resident education, to mitigate groundwater contamination with prescription (or non-prescription...) drugs?	See Responses to Comments 2.2 and 4.2.
5.30	Drip irrigation using treated wastewater is a reliable source of irrigation water; however, drip irrigation is not a reliable means of disposal for treated effluent. ...how will lines be kept from freezing? ...information indicates that irrigation has limited capacity and reliability as a wastewater disposal method. How will the balance of 50,000 gallons/day of design flow be disposed of?	As discussed in Section 6.0, the proposed wastewater treatment facility will utilize the existing 10,000 gpd leaching field and the proposed 50,000 gpd drip dispersal fields. The wastewater treatment plant is designed to treat an average daily flow of 60,000 gallons per day and will meet or exceed required effluent discharge limits for BOD5 (10mg/l), TSS (10mg/l), Total Nitrogen (10 mg/l), Bacterial (CC 200/100ml), and be designed with the potential to provide 0.5 mg/l of phosphorus (add ferric Chloride). As discussed in section 6.4, Geoflow systems can be used year round in all climates. The drip line self drains and does not hold water keeping the system working even in the coldest climates. The system, as designed, will not be used for turf irrigation purposes. A detailed review of the design and performance of drip dispersal systems in freezing environments is provided in Appendix B. See also Responses to Comments 2.1 and 4.1.
5.31	A small parking area for visitors/hikers is planned...can it be presumed that sections of the property will be open to the public? Will there be public access restrictions? Are these visitors included in projected traffic counts?	Parking lot and walking trails are specified for public access. This was factored into traffic counts. The remaining areas are private access.
5.32	Do cut/fill, pavement, and total paved area calculations include the parking area for open space? Is additional parking area beyond what is currently in place for QRCC envisioned for patrons of the restaurant?	The calculations do include the trailhead parking. There will be a net reduction in parking spaces in the restaurant area of 57 spaces.
5.33	[Although] percholate will not be used as a blasting agent at the site... Given that there are private drinking water wells near the project site, the proponent should be required to pay for before- and after-testing of these potable water supplies, and should be required to pay for appropriate treatment in case that any	See Response to Comment 2.3.

	wells become contaminated.	
5.34	Section D, Facility Information, Item 3 of the Groundwater Discharge Permit Application specifies that the project will include "752 age-restricted" bedrooms, an average of 4.29 bedrooms/unit. What does "age-restricted" mean?	The project will consist of: <ul style="list-style-type: none"> • 86 single family, 3 bedroom units (86 units) • 26 duplex style, 3 bedroom units (52 units) • 3, 12-unit, 2 bedroom units (36 units) The total number of units for TRQR is 174 and the total number of bedrooms is 486. Unit ownership of units and primary, full-time occupancy is restricted to those 55 years of age and older.
5.35	[If it is 4.29 bedrooms/unit] trip estimates should be adjusted accordingly, and possibly water usage figures.	The trip generation estimates are based on the number of units, and not the number of bedrooms. They are obtained through counts of existing age-restricted housing. They include 2, 3, and 4 bedroom units, and include additional trips due to visitors staying in extra bedrooms.
5.36	It is highly questionable, if not physically impossible, that drip irrigation fields could accommodate 5/6 of the [proposed wastewater] discharge; alternate leaching facilities need to be designed and constructed.	As discussed in Section 6.0, the proposed wastewater treatment facility will utilize the existing 10,000 gpd leaching field and the proposed 50,000 gpd drip dispersal fields. The wastewater treatment plant is designed to treat an average daily flow of 60,000 gallons per day and will meet or exceed required effluent discharge limits for BOD5 (10mg/l), TSS (10mg/l), Total Nitrogen (10 mg/l), Bacterial (CC 200/100ml), and be designed with the potential to provide 0.5 mg/l of phosphorus (add ferric Chloride). As discussed in section 6.4, Geoflow systems can be used year round in all climates. The drip line self drains and does not hold water keeping the system working even in the coldest climates. The system, as designed, will not be used for turf irrigation purposes. A detailed review of the design and performance of drip dispersal systems in freezing environments is provided in Appendix B. See also Responses to Comments 2.1 and 4.1.
5.37	Water withdrawal figures for irrigation should also be adjusted?	See Response to Comment 3.1.
5.38	Section D, Facility Information, Item 8b of the Groundwater Discharge Permit Application indicates that no hazardous wastes will be generated. Are pesticides and herbicides, used on the golf course, and sanitizers used in a restaurant, and their residues hazardous wastes?	See Responses to Comments 2.4, 4.2, and 5.28.
5.39	[Appendix H specifies that] "The Residences at Quail Ridge consists of 174 residential dwelling units..." This is the first mention of the number 174; previous sections of the document	The project will consist of: <ul style="list-style-type: none"> • 86 single family, 3 bedroom units (86 units) • 26 duplex style, 3 bedroom units (52 units) • 3, 12-unit, 2 bedroom units (36 units) The total number of units for TRQR is 174.

	mention either 170 or 175 units.	See also Responses to Comments 1.3, 5.2, 5.9, 5.17, and 5.26.
5.40	The proposed project creates housing for over-55 individuals in close proximity to a golf course. Traditionally maintained golf courses, as QRCC has been, employ a variety of pesticides and herbicides... Care should be taken to prevent residents' exposure to pesticides, herbicides, and fungicides used in turf maintenance.	See Responses to Comments 2.4, 4.2, 5.20, and 5.38.
	Comment Letter #6 Massachusetts Executive Office of Transportation, dated January 17, 2008	
6.1	The current NPC does not significantly change the traffic impacts originally associated with the project; however, the proponent should work with MassHighway to address impacts of the Route 2A left turns into the site drive	Conley Associates, Inc. has been in discussion with MassHighway since the outset of the NPC. MassHighway has not discussed a desire to mitigate the additional left turns into the site.
6.2	We recommend that the proponent investigate public infrastructure connections to the MBTA, Commuter Rail Fitchburg Line, to reduce site generated traffic	The proponent has agreed to participate in any existing programs that promote connections to mass transit in the area.
	Comment Letter #7 Massachusetts Historical Commission (MHC), dated January 8, 2008	
7.1	...an archeological site inspection survey should be conducted by qualified cultural resource management firm to document the current condition of the archeological sites and to offer recommendations. The report should include scaled project plans showing existing and proposed conditions for the project, including the associated infrastructure with the locations of the archeological sites clearly indicated.	See discussion of archeological features in Section 9..
7.2	MHC requests that the project engineer clarify the status of the Army Corps of Engineers permitting, and whether a Corps permit is required for the TRQR project	TRQR is eligible for a U.S. Army Corps of Engineers Programmatic General Permit (PGP).
	Comment Letter #8 Anderson & Krieger, LLP, (Town of Acton) dated January 23, 2008	
8.1	The NPC does not state how much water	See Responses to Comment s1.7 and 3.2.

	the applicant proposes to withdraw.	
8.2	Since site is located in "Highly Stressed" Nashoba Brook Watershed and increases to impervious area are significant, comprehensive review of runoff, drainage, wetlands impacts, drinking water effects, and other environmental impacts required, including alternative.	See Response to Comment 3.1.
8.3	Acton Health Dept. would like to see analysis of...a surface water quality sampling point, with permanent access along Nagog Brook near pond, to augment current water quality surveillance program.	The proponent will continue talks to identify potential areas where additional wastewater volumes (beyond those of development) could be disposed.
8.4	Secretary should require applicant to evaluate re-use of treated wastewater for irrigation or pond augmentation.	Although reuse of water for irrigation is not part of this SFEIR, QRCC has had discussions with DEP regarding this issue. QRCC intends to have this project become as "green" as possible and welcomes future discussions with DEP following MEPA and permit approvals.
8.5	The Acton Health Dept. would like to continue talks to identify areas of site where additional wastewater volumes (beyond those of development) could be disposed. The Health Dept. would also like to discuss re-use of treated wastewater for irrigation and other innovative and beneficial water management practices.	See Response to Comment 8.3.
8.6	The shift from an 18-hole golf course to a 9-hole golf course plus residential development raises significant traffic issues that should be of concern to MassHighway and the public. They are certainly of concern to the Town... [These include] the proximity of Skyline drive to the 2A/27 intersection... [the degradation of the] LOS for side streets to 2a/27. [The proponent] should provide analysis on projected impacts and alternatives for avoiding, minimizing or mitigating project impacts on the 2a/27 intersection and to Great Road. An SFEIR should provide data, analysis, and proposed alternatives relating to anticipated Great Road traffic operations.	The Town of Acton has approved the project with the exception of the secondary access issue. The Town did not request off-site mitigation at any of intersections along Great Road. All intersection operations analysis has been provided to the Town. Specific data not summarized in tables within the text can be found in the Appendix of our NPC submission.
8.7	The town has not received additional detail as to queue length, waiting times,	See Response to Comment 8.6.

	etc. to ensure that Skyline Drive/Great Road intersection will not further degrade nearby Great Road intersections and is skeptical that a functional solution has been proposed.	
8.8	Given the lack of information in the NPC, prior MEPA documents, and administrative filings, it is impossible to discern what impact the approval of this project would have on all other competing water sources, withdrawal points, and water providers... [The applicant should be required to prove] that withdrawals will not impact any drinking water well.	See Responses to Comments 1.7, 3.2, and 8.1.
8.9	New data should [be provided] regarding the impacts of water withdrawals and that the current proposal is below the thresholds for a water withdrawal permit.	See Response to Comments 5.25..
8.10	The applicant has not submitted information to MassDEP regarding the design or construction of the waste water treatment facility... the Acton Health Dept. cannot definitively state that the project as proposed is viable and will comply with wastewater regulations... The main thread of the Health Department's comments is that the applicant has not sufficiently fleshed out the treatment Plant proposal in a way that permits assessing (1) whether it is feasible to construct the number of housing units proposed without exceeding plant capacity or (2) the potential impacts to Nagog Pond, the Water District's Conant well fields and the several private water sources in the area.	The design of the proposed wastewater treatment facility is in accordance with the Ground Water Discharge Permit Program (314 CMR 5.00) is discussed in Section 6.0. See also Responses to Comments 1.1, 1.2, and 1.3.
8.11	While the present NPC only appears to address one option (9-hole golf course and residential subdivision), it does not appear that Quail Ridge has ever abandoned its option to build the 18-hole golf course, with the water withdrawals requested in its DEP application of August, 2007. That alternative needs to be the subject of this NPC and must be evaluated with the alternative that Quail Ridge has selected for inclusion in its NPC.	Although the final construction of the QRCC FEIR facility is not complete, the 18-hole golf course is operational. The 2007 ACO required submission of a Water Withdrawal Permit Application. QRCC is following all requirements of the ACO including this one. However, TRQR is the subject of this SFEIR and is a 174 age-restricted condominium that will replace the northern nine (9) of the operational 18-hole golf course. TRQR includes appurtenant features (SCS) including the southern nine (9) of the previously operational 18-hole golf course.